REMARKS

The present amendment is submitted in response to the Office Action mailed April 30, 2008. Claims 1-13 remain in this application. In view of the amendments above and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

ALLOWED CLAIMS

Applicant wishes to thank the Examiner for indicating that Claims 1 – 12 are deemed allowable over the prior art of record, pending resolution of any rejections noted in the instant office action, because the prior art does not specifically disclose the claimed method for deriving a reconstruction result.

35 U.S.C. §101

Claims 1 – 12 were rejected under 35 U.S.C. §101 as being allegedly directed to non-statutory subject matter. The rejection is understood to be based on the premise that the claimed invention is allegedly directed to non-statutory subject matter for failing to place the invention squarely within one statutory class of invention because the claimed subject matter produces a result that remains in the abstract and, thus, fails to achieve the required status of having real world value, because claims 1-12 are determined to be steps pertaining to a mathematical algorithm, converting one set of numbers into another set of

numbers, whereby the method does not manipulate appropriate subject matter, and thus cannot constitute a statutory process.

Applicants respectfully traverse the rejection of independent claims 1 – 12 under 35 U.S.C. §101. Applicants have, however, amended claim 1 to recite that the localized measurement error is contained to the area of the selected 2-dimensional part and that a representation is provided of at least the reconstructed surface part.

Claim 1 now recites:

> A method of reconstructing a surface of an object; the object being represented by a 2-dimensional grid of measurements, where for each grid point the measurements include corresponding information on a first slope of the surface in a first direction and a second slope of the surface in a different second direction; the method including selecting a 2-dimensional part of the grid **over which an accurate reconstruction may be carried out** fitting a corresponding part of the surface to the measurements of all grid points in the selected part, **thereby significantly reducing the effect of a localized measurement error to the area of the selected 2-dimensional part, and providing a representation of at least the reconstructed surface part,** where the fitting for each grid point of the selected part is based on both the corresponding first and second slope information.

Applicants submit that claim 1 now recites the production of a result that achieves the status of having a real world value, i.e., significantly reducing the effect of a localized measurement error to the area of a selected 2-dimensional part and providing a representation of least the reconstructed surface part.

Support for the amendment can be found in the specification at Page 2 which states that by performing a fitting based on all measured slopes of the selected part, the

effect of a localized measurement error is significantly reduced to mainly the area of the error. The invention advantageously obviates the need of performing an integration operation along a one-dimensional path. As discussed in the background, if a measurement system is used that obtains slope information only one direction during a scan, scanning needs to be performed in both directions. In such a case, measurement points in one direction may not be perfectly aligned with the measurement points in the other direction. To compensate for irregularities in the measurements, usually a calibration procedure is performed to correct the position of the measurement points to obtain the perfect equidistant rectangular measurement grid. Such calibration is usually based on interpolation that in itself introduces further errors in the measurements and is time-consuming.

To overcome the drawbacks of the prior art approach which include a need to perform a calibration to compensate for irregularities and the further propagation or measurement errors in addition to the time consumed, the invention uniquely performs a 2-dimensional fitting operation, involving much more measured data. Moreover, instead of using only one measured slope of each involved grid point, both slopes are used. This enables significant reduction in propagation of measurement errors. Preferably, a user can indicate the area in which accurate reconstruction according to the invention is desired. Outside the selected area, a conventional reconstruction may be carried out.

Based on the afore-mentioned distinctions, it is believed that Applicant's Claim 1 recites patentable subject matter, and therefore, withdrawal of the rejections with respect to Claim 1 and allowance thereof is respectfully requested.

Claims 2-6 depend from Claim 1 and therefore include the limitations of Claim 1. Accordingly, for the same reasons given above for Claim 1, Claims 2-6 are believed to contain patentable subject matter. Accordingly, withdrawal of the rejections with respect to Claims 3-6 and allowance thereof are respectfully requested.

Independent Claims 7, 11 and 12, recite similar subject matter as Claim 1 and therefore contain the limitations of Claim 1. Hence, for at least the same reasons given for Claim 1, Claims 7, 11 and 12 are believed to contain patentable subject matter.

Accordingly, withdrawal of the rejections with respect to Claims 7, 11 and 12, and allowance thereof are respectfully requested.

Claims 8-10 depend from Claim 7 and therefore include the limitations of Claim 10. Accordingly, for the same reasons given above for Claim 7, Claims 8-10 are believed to contain patentable subject matter. Accordingly, withdrawal of the rejections with respect to Claims 8-10 and allowance thereof is respectfully requested.

NEW CLAIM

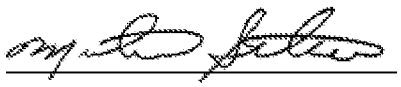
New claim 13 has been added and is directed to a computer program product embodying computer instructions for performing the method of the invention.

Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-13 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mr. Frank Keegan, Intellectual Property Counsel, Philips Electronics North America, at 914-333-9663.

Respectfully submitted,



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